CMF ® MONITOR

Customization Guide

Version 5.5

June 30, 2003

bmcsoftware

Restricted Rights Legend

Contacting BMC Software

You can access the BMC Software Web site at **http://www.bmc.com**. From this Web site, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

United States and Canada

Address BMC Software, Inc.
2101 CityWest Blvd.
Houston TX 77042-2827

Telephone 713 918 8800 or
800 841 2031

Fax 713 918 8000

Outside United States and Canada

Telephone (01) 713 918 8800

Fax (01) 713 918 8000

Customer Support

You can obtain technical support by using the Support page on the BMC Software Web site or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see “Before Contacting BMC Software.”

Support Web Site

You can obtain technical support from BMC Software 24 hours a day, 7 days a week at **http://www.bmc.com/support.html**. From this Web site, you can

- read overviews about support services and programs that BMC Software offers
- find the most current information about BMC Software products
- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

Support by Telephone or E-mail

In the United States and Canada, if you need technical support and do not have access to the Web, call 800 537 1813. Outside the United States and Canada, please contact your local support center for assistance. To find telephone and e-mail contact information for the BMC Software support center that services your location, refer to the Contact Customer Support section of the Support page on the BMC Software Web site at **www.bmc.com/support.html**.

Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - — product name
  - — product version (release number)
  - — license number and password (trial or permanent)
- operating system and environment information
  - — machine type
  - — operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - — system hardware configuration
  - — serial numbers
  - — related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - — product error messages
  - — messages from the operating system, such as `file system full`
  - — messages from related software

Contents

About This Book

This book discusses how to perform the installation procedures unique to CMF MONITOR. This book serves as a companion to the *MAINVIEW Common Customization Guide* and the *MAINVIEW Administration Guide*; it describes how to complete the installation and customization processes you began in the *MAINVIEW Common Customization Guide*.

You should use this book if you are a system programmer, data center technician, or information systems manager responsible for planning CMF MONITOR's implementation, installing CMF MONITOR, and configuring or changing CMF MONITOR's operating environment.

How This Book Is Organized

This book is organized as follows. In addition, an index appears at the end of the book:

Chapter	Description
Chapter 1, "Manual Customization"	Documents the final manual customization steps in the process begun in the *MAINVIEW Common Customization Guide*.
Chapter 2, "Post-Customization"	Provides information on further steps after product customization.
Chapter 3, "Writing Data to Extractor Output Data Sets"	Explains how to create and write data to CMF MONITOR or DSO data sets and how to modify the Extractor JCL.
Chapter 4, "CMF Analyzer Spreadsheet Converter"	Explains how to download the spreadsheet converter program to your PC.

Required Reading

This book contains information about customization and maintenance tasks unique to CMF MONITOR. You need information from this book and from the other documents to install and implement CMF MONITOR.

Function	Document Name
Download the CMF MONITOR product tape components and RECEIVE, APPLY, and ACCEPT the product libraries, and access AutoCustomization.	*OS/390 and z/OS Installer Guide*
Perform customization either manually or automatically using AutoCustomization.	*MAINVIEW Common Customization Guide*
Perform administrative tasks associated with the operational environment of CMF MONITOR, as well as all other MAINVIEW products.	*MAINVIEW Administration Guide*
Become familiar with MAINVIEW product family.	*Using MAINVIEW*
Get started quickly with MAINVIEW products.	*Quick Start with MAINVIEW*

Related Reading

These documents explain how to use the components in CMF MONITOR:

Tasks	Book Title	Book Description
Using CMF MONITOR's batch reporting components	*CMF MONITOR Batch User Guide*	Explains how to use CMF MONITOR Extractor and Analyzer control statements, provides information about producing reports using CMF MONITOR data.
	CMF MONITOR Batch Reference Guide	Provides a reference for Extractor and Analyzer control statements and parameters, contains report examples, and describes the fields in each report.
Using CMF MONITOR Online	*CMF MONITOR Online Getting Started*	Provides a step-by-step tutorial for using CMF MONITOR Online and the MAINVIEW window interface.
	CMF MONITOR Online User Guide	Explains how to use CMF MONITOR Online views.
	MAINVIEW Command List	Lists MAINVIEW window interface commands available for CMF MONITOR Online.
Using CMF MONITOR Extractor utilities	*CMF MONITOR Online User Guide*	Explains how to access and use the STATUS, CONFIG, DEBUG, and PERUSE utilities.
Using CMFMON	*CMF MONITOR CMFMON User Guide*	Explains how to use CMFMON's online, batch, and write facilities.
Using the DSO component	*DSO User Guide and Reference*	Explains how to use the DATA SET OPTIMIZER (DSO) batch report control statements and interpret the report information.

Other Related BMC Software Product Documents

Other BMC Software products use CMF Extractor to gather data for their reports and displays:

Product	Book Titles
CMF MONITOR Online	• *CMF MONITOR Online Getting Started* • *CMF MONITOR Online User Guide*
MAINVIEW for OS/390	• *MAINVIEW for OS/390 User Guide and Reference* • *Getting Started with* MAINVIEW for OS/390

Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. If you are a Windows or Unix user, you can view online books with Acrobat Reader from Adobe Systems.

To Access Online Books

Online books are formatted as Portable Document Format (PDF) files. You can view them, print them, or copy them to your computer by using Acrobat Reader 3.0 or later.You can access online books from the documentation compact disc (CD) that accompanies your product or from the World Wide Web.

In some cases, installation of Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at **http://www.adobe.com**.

To view any online book that BMC Software offers, visit the support page of the BMC Software Web site at **http://www.bmc.com/support_home**. Select a product to access the related documentation.

To Request Additional Printed Books

BMC Software provides printed books with your product order. To request additional books, go to **http://www.bmc.com/support_home.**

Online Help

The CMF MONITOR product includes online Help. In the CMF MONITOR ISPF interface, you can access Help by pressing **F1** from any ISPF panel.

To access the Messages & Codes application from any CMF MONITOR panel, type `MSG` on the **COMMAND** line.

Release Notes and Other Notices

Printed release notes accompany each BMC Software product. Release notes provide current information such as

- updates to the installation instructions
- last-minute product information

In addition, BMC Software sometimes provides updated product information between releases (in the form of a flash or a technical bulletin, for example). The latest versions of the release notes and other notices are available on the Web at **http://www.bmc.com/support_home**.

Migration Considerations for CMF MONITOR 5.5.00

CMF MONITOR 5.5.00 has added new features and enhancements, which may impact some user-customized views. If you are migrating from an earlier version of CMF MONITOR, you may have customized some of the following views. BMC Software highly recommends that you recustomize them.

ARD	ASD	ASRM	DDJOB
DUJOB	JCPU	JCPUR	JDDEV
JDELAY	JDELAYZ	JDENQ	JFLOW
JFLOWZ	JHSMD	JHSMSTAT	JINFO
JIO	JMSGD	JOVER	JOVERR
JPAGDM	JPAGDMR	JPAGOV	JPAGSW
JSRM	JSRMD	JSTOR	JSTORD
JSUBD	JSUM	JUDEV	JUENQ
JUSE	JXCFD	LPARSTAT	SDEV
SENQ	SENQR	TSTAT	WCPU

ARD	ASD	ASRM	DDJOB
WDELAY	WMASSC	WMCLSZ	WMCNVT
WMDLY	WMDLYZ	WMPRD	WMRTD
WMSCLS	WMSPLX	WMWKM	

To determine if you are affected by any other changes beyond the view customization changes referred to above, you should read “What’s New” in the Release Notes.

Chapter 1 Manual Customization

This chapter explains how to complete the final steps in the manual customization process that you began in the *MAINVIEW Common Customization Guide*.

Note: If you used AutoCustomization to customize CMF MONITOR, you do not need to read this chapter. Go to Chapter 2, "Post-Customization" on page 2-1, for information on what to do next.

The following steps are unique to CMF MONITOR:

- Create the COMMON STORAGE MONITOR startup procedure.
- Specify the Extractor operating environment.
- Copy sample CMF MONITOR parameter and JCL members to UBBPARM and UBBSAMP.
- Copy sample CMF MONITOR Online screen definitions to SBBSDEF.
- Create CLIST for invoking CMFMON's online facility.
- Create JCL for starting CMFMON's write facility.
- Assemble and link the JES3 mapping CSECT.

Note: Be sure you complete each of these steps, even if you have already customized MAINVIEW for OS/390. Although two of the steps (copying sample parameter and JCL members to UBBPARM and UBBSAMP and copying sample screen definitions to SBBSDEF) look similar to two steps in the customization procedure for MAINVIEW for OS/390, the members and screens that are copied are actually quite different.

Creating the CSM Startup Procedure

Both MAINVIEW for OS/390 and CMF MONITOR depend on COMMON STORAGE MONITOR data collection services. In this step, you create a procedure to start COMMON STORAGE MONITOR.

Only one COMMON STORAGE MONITOR can be active at a time. If COMMON STORAGE MONITOR is already running on this system, you may skip this step.

COMMON STORAGE MONITOR does not require an address space to be active. In fact, the initialization process for COMMON STORAGE MONITOR, which interacts with the MAINVIEW for OS/390 GETMAIN and FREEMAIN routines, is completed in about 20 seconds and then simply terminates.

Note: BMC Software recommends that only one person have the responsibility for starting and stopping COMMON STORAGE MONITOR. When the COMMON STORAGE MONITOR data collectors are stopped, the connection between an address space and allocated storage areas is lost, and monitoring information could be lost as a result.

To create a procedure to start COMMON STORAGE MONITOR:

1. Decide how to start COMMON STORAGE MONITOR, either as a subsystem (the preferred method) or as a started task. The table below describes the advantages of both methods.

Note: If you are setting up MAINVIEW for OS/390, BMC Software strongly recommends that you start COMMON STORAGE MONITOR data collection services as soon as possible after an IPL, and leave it active at all times thereafter.

When started as	COMMON STORAGE MONITOR
A subsystem	• Is started automatically after every IPL, thus resulting in the smallest number of unknown storage allocations. • Can collect information about other address spaces that get started at IPL, such as JES, LLA, and VTAM.
A started task	• Can monitor either selected jobs or all jobs. • Can be started any time after IPL by the MAINVIEW for OS/390 START command, or automatically after every IPL by a cataloged procedure in COMMND*xx*.

2. Define the COMMON STORAGE MONITOR start procedure with the instructions from either the subsystem or the started task section.

Starting COMMON STORAGE MONITOR as a Subsystem:

Subsystems are initialized in the order they are defined in SYS1.PARMLIB member IEFSSN*xx*. Therefore, if you want COMMON STORAGE MONITOR to start before other subsystems, such as JES, specify the statement first in IEFSSN*xx*.

To start COMMON STORAGE MONITOR as a subsystem:

1. Add this statement to the member SYS1.PARMLIB(IEFSSN*xx*):

```
BBXS,BBXCSMON,'START,parameters'
```

   where **START,** ***parameters*** adheres to the syntax shown in Figure 1-3 on page 1-6. Each parameter is described in "COMMON STORAGE MONITOR START Parameter" on page 1-6.

   If you do not specify **START,** ***parameters***, the default monitors all jobs using CSA and SQA running above or below the 16 MB line. The equivalent START parameter would be

```
BBXS,BBXCSMON,'START,ALL,BOTH,ANY'
```

Other examples of the START parameter that can be defined for COMMON STORAGE MONITOR in SYS1.PARMLIB member IEFSSN*xx* include

Example 1: `BBXS,BBXCSMON,'START,ALL,BOTH,ANY,7000'`
This parameter monitors all address spaces in CSA or SQA storage, above or below the 16 MB line, and restricts COMMON STORAGE MONITOR to a maximum of 7000 concurrent table entries.

Example 2: `BBXS,BBXCSMON,'START,STC,CSA,BELOW'`
This parameter causes COMMON STORAGE MONITOR to monitor started tasks allocating CSA below the 16 MB line.

Note: You cannot define the JOBNAMES subparameter with the START parameter when you define COMMON STORAGE MONITOR as a subsystem.

2. Include the name of the *hilevel*.BBLINK load library in SYS1.PARMLIB member LNKLST*xx*; see the *MAINVIEW Common Customization Guide* for more information.

Starting COMMON STORAGE MONITOR as a Started Task:

To start COMMON STORAGE MONITOR as a started task:

1. Create a member named BB$CSMON in SYS1.PROCLIB.

2. Copy *hilevel*.BBILIB member BAIAACSM (shown below) to the new member in SYS1.PROCLIB.

Figure 1-1 Example of BBILIB Member BAIAACSM

```
//BB$CSMON PROC OPT='START',MEM='BBXJOBS',DSN='SYS1.PARMLIB'
//*************************************************************
//*                                                           *
//*   THIS PROC ACTIVATES THE BBXS COMMON STORAGE MONITOR.    *
//*   IT CAN BE PLACED IN SYS1.PROCLIB AND ACTIVATED AT       *
//*   IPL WITH THE ENTRY, COM='S BB$CSMON,SUB=MSTR' IN        *
//*   COMMND00 OF SYS1.PARMLIB.  A STEPLIB IS REQUIRED IF     *
//*   THE BBLINK LOAD LIBRARY IS NOT IN THE LINK LIST.        *
//*                                                           *
//* SYNTAX:                                                   *
//*                                                           *
//*   OPT='STOP'                                              *
//*                                                           *
//*              +-      -+ +-  -+ +-   -+ +-            -+  *
//*   OPT='START,|ALL     |,|BOTH|,|ANY  |,| # OF ENTRIES |' *
//*              |TSU     | |CSA | |BELOW| +-            -+  *
//*              |STC     | |SQA | +-   -+                   *
//*              |BATCH   | +-  -+                           *
//*              |JOBNAMES|                                  *
//*              +-      -+                                  *
//*                                                           *
//*   IF JOBNAMES IS SPECIFIED MEMBER &MEM IN DATA SET        *
//*   &DSN MUST CONTAIN THE LIST OF SELECTED JOB NAMES        *
//*   FOR MONITORING.                                         *
//*                                                           *
//* EXAMPLES:                                                 *
//*                                                           *
//*   S BB$CSMON,OPT='START,ALL,BOTH,ANY'  <- DEFAULTS        *
//*   S BB$CSMON,OPT='START,STC,CSA,BELOW'                    *
//*   S BB$CSMON,OPT='STOP'                                   *
//*                                                           *
//*************************************************************
//S1        EXEC PGM=BBXCSMON,TIME=1440,PARM='&OPT'
//*STEPLIB  DD DISP=SHR,DSN=BOOL.BBLINK <- AUTHORIZED LIBRARY
//SSIN      DD DISP=SHR,DSN=&DSN(&MEM)  <- JOBNAMES DATA SET
```

3. On the BB$CSMON PROC statement, modify the **&OPT=** string to include the values you want. Use the format shown in Figure 1-3 on page 1-6.

Examples of the OPT= parameter that can be defined for COMMON STORAGE MONITOR in the PROC statement are as follows:

Example 1: `OPT='START,ALL,BOTH,ANY'`

This **OPT=** parameter monitors all address spaces in both CSA and ESQA, both above and below the 16 MB line.

Example 2: `OPT='START,STC,CSA,BELOW'`

This **OPT=** parameter monitors only started task address spaces in CSA below the 16 MB line.

Example 3: `OPT='START,JOBNAMES'`

This **`OPT=`** parameter monitors only the address spaces specified in SYS1.PARMLIB member BBXJOBS.

4. If the BBLINK load library is not in the link list, uncomment the STEPLIB DD statement and change **`DSN=BOOL.BBLINK`** to **`DSN=`***hilevel*`.BBLINK`.

5. Optionally copy *hilevel*.BBILIB member BAIAAJBS (shown in Figure 1-2) to SYS1.PARMLIB.

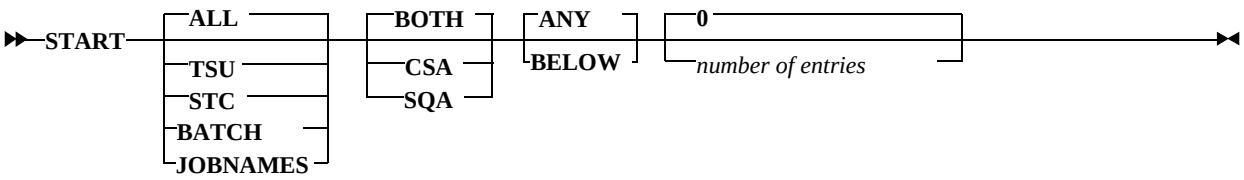
6. If you define JOBNAMES as a START subparameter, modify the SYS1.PARMLIB member copied during the previous step to include only the address spaces that you want COMMON STORAGE MONITOR to monitor.

Figure 1-2 Example of BBILIB Member BAIAAJBS

```
*MASTER*                                                        00010000
ALLOCAS                                                         00070000
CATALOG                                                         00120000
CONSOLE                                                         00060000
DUMPSRV                                                         00050000
GRS                                                             00040000
IOSAS                                                           00130000
JES2                                                            00100000
JES3                                                            00110000
LLA                                                             00080000
NET                                                             00130000
PCAUTH                                                          00020000
RASP                                                            00150000
RMF                                                             00150000
SDSI                                                            00150000
SMF                                                             00090000
SMS                                                             00140000
SYSLOG
TCAS                                                            00140000
TRACE                                                           00030000
TSO                                                             00140000
XCFAS                                                           00140000
VLF
```

COMMON STORAGE MONITOR START Parameter:

Figure 1-3 START Parameter Syntax for COMMON STORAGE MONITOR



The subparameters for the START parameter are as follows:

ALL|TSU|STC|BATCH|JOBNAMES
Indicates the type of jobs you want COMMON STORAGE MONITOR to monitor: all jobs, TSO jobs only, started tasks only, batch jobs only, or only certain jobs. The default is ALL.

To monitor only certain jobs, specify the JOBNAMES option and follow the instructions in “Starting COMMON STORAGE MONITOR as a Started Task” on page 1-3 to copy and modify member BBXJOBS in SYS1.PARMLIB to list the job names you want to monitor.

Note: You cannot define the JOBNAMES subparameter with the START parameter when you define COMMON STORAGE MONITOR as a subsystem.

BOTH|CSA|SQA
Indicates whether you want COMMON STORAGE MONITORCOMMON STORAGE MONITOR to monitor CSA storage, SQA storage, or both. The default is BOTH.

ANY|BELOW
Indicates whether you want COMMON STORAGE MONITOR to monitor both above and below the 16 MB line, or below only. The default is ANY.

number of entries
Indicates the number of entries in the table used to track GETMAINs. COMMON STORAGE MONITOR maintains table entries in ECSA when monitoring storage allocation requests. Each table entry is 32 bytes. This is an optional parameter that allows you to define a specific amount of ECSA storage for the COMMON STORAGE MONITOR table, which can be any amount from 512 to 100K bytes.

BMC Software recommends that you leave this field blank to allow COMMON STORAGE MONITOR to calculate the maximum number of entries it can maintain in ECSA, based on the type of address space and storage monitoring defined.

Specifying Extractor Operating Environment

You must specify the correct Extractor operating environment for the combination of BMC Software products you have installed in your system. In this step you select a sample member containing the minimum set of Extractor control statements for the combination of products at your site.

The following BMC Software products use the Extractor:

- MAINVIEW for OS/390
- CMF MONITOR

Note: If you will not be recording Extractor data to SMF data sets, in this step you must also

- allocate CPM output data sets
- optionally allocate IPM output data sets

Each product or combination of products requires specific Extractor control statements to collect the necessary data for product views, displays, and reports. Samples of the different Extractor control statement sets for each product mix are shipped in BBSAMP.

To specify the Extractor operating environment for your BMC Software product mix:

1. Create two members in *hilevel*.UBBSAMP with the names CMFCPM00 and CMFIPM00.

2. Go to Table 1-1 on page 1-8 and locate the row that contains X marks for the combination of Extractor products you have. Note the BBSAMP member name on that row.

3. Copy the correct sample member from BBSAMP to the CMFCPM00 member in *hilevel*.UBBSAMP.

4. Go to Table 1-2 on page 1-8 and locate the row that contains X marks for the combination of Extractor products you have. Note the BBSAMP member name on that row.

5. Copy the correct sample member from BBSAMP to the CMFIPM00 member in *hilevel*.UBBSAMP.

To allocate CPM output data sets and optionally allocate IPM output data sets for CMF MONITOR, use *hilevel*.UBBSAMP member:

- CMFJBSAM for BSAM data sets
- CMFJVSAM for VSAM data sets

Table 1-1 Sample Members to Copy into CMFCPM00

If you are customizing		Copy BBSAMP member
CMF MONITOR	**MAINVIEW for OS/390**	
X		CMFCC
X		CMFCCD
X		CMFCCDM
X	X	CMFCCDMR
X	X	CMFCCDR
X		CMFCCM
X	X	CMFCCMR
X	X	CMFCCR
		CMFCD
		CMFCDM
	X	CMFCDMR
	X	CMFCDR
		CMFCM
	X	CMFCMR
	X	CMFCR

Table 1-2 Sample Members to Copy into CMFIPM00

If you are customizing		Copy BBSAMP member
CMF MONITOR	**MAINVIEW for OS/390**	
X		CMFIC
X		CMFICD
X	X	CMFICDR
X	X	CMFICR
		CMFID
	X	CMFIDR
	X	CMFIR

Copying Sample Parameter and JCL Members

All sample JCL members for use with CMF MONITOR are distributed in *hilevel*.BBSAMP. These members are then copied (and in some cases, renamed) to *hilevel*.UBBPARM. A description of each of these members is in Table 1-4 on page 1-10.

In this step, you copy sample JCL members for CMF MONITOR from BBSAMP to your own *hilevel*.UBBSAMP, and you copy default control statement members from BBPARM to your own *hilevel*.UBBPARM libraries. From then on, all modifications should be made in UBBSAMP and UBBPARM, leaving the originals in BBSAMP and BBPARM untouched. By performing this step, you prevent the modifications you make for your site from being overwritten when new product FMIDs are added or when maintenance is applied.

To create copies of the sample members in *hilevel*.UBBPARM and in *hilevel*.UBBSAMP:

1. Copy *hilevel*.BBSAMP member CMFCPARM to your private JCL library.

2. Modify the JCL by following the directions at the top of the member.

3. Submit the JCL.

Once the sample JCL members and control statement members have been copied, you can use them to begin executing CMF MONITOR. Instructions for using each of these samples is provided within the member itself.

You can also modify these samples to meet the specific needs of your site. For additional information about modifying either Analyzer or Extractor control statements, see the *CMF MONITOR Batch User Guide*.

Table 1-3 on page 1-10 contains a description of all sample members copied from BBSAMP to UBBSAMP. Table 1-4 on page 1-10 contains sample control statements copied from BBPARM to UBBPARM.

Note: If a member has been renamed since the last release of CMF MONITOR, its former name is indicated in the description.

Table 1-3 Sample Members Available for Customization in UBBSAMP

Member Name	Description
@BBXINIT	JCL to initialize BBXS.
CMFJMONB	Sample JCL for running CMFMON type 79 batch reports. See the *CMF MONITOR CMFMON User Guide* for information about using this member.
CMFJANL	JCL to run the CMF MONITOR Analyzer (formerly CMFANJCL). See the *CMF MONITOR Batch User Guide* for information about using this member.
CMFJBSAM	JCL for creating BSAM Extractor output data sets.
CMFJVSAM	JCL for creating VSAM Extractor output data sets.
CMFMJCLRB	JCL used for clearing CMF MONITOR output data sets as a batch job. If you record CMF MONITOR data to SMF, you do not need to use this member.
CMFJCLRS	JCL used for clearing CMF MONITOR output data sets as a started task. If you record CMF MONITOR data to SMF, you do not need to use this member.
CMFJCVBS	JCL to run the COPYVBS (CX10CVBS) utility (formerly CMFCVJCL).
CMFJDSO	JCL to run the DSO Analyzer (formerly CMFANLD1).
CMFJDSOV	Batch job to extract VSAM catalog information for DSO (formerly DSOVSAM).
CMFJEXTR	JCL for starting the CMF MONITOR Extractor without CMF MONITOR Online (formerly CMFEXT00).
CSMAPSAS	Sample SAS routine to produce a common storage report that uses CMF type 29 records.
CX10UMOD	Sample user trace SRB routine, as described with the TRACE Extractor control statement in the *CMF MONITOR Batch User Guide.*
CX98REPG	JCL to create a sample report for testing the CMF MONITOR Analyzer report spreadsheet converter. See the *CMF MONITOR Batch User Guide* for more information on using the spreadsheet converter program.

Table 1-4 Sample Control Statement Members Available for Customization in UBBPARM (Part 1 of 2)

Member Name	Description
ANLYSAMP	CMF MONITOR Analyzer control statements to produce most of the batch reports.
CMFANLTR	CMF MONITOR Analyzer control statements to produce trace reports from the SMF type 76 trace records.
CMFMNB00	Sample control statements for producing CMFMON batch reports. See the *CMF MONITOR CMFMON User Guide* for information about using this member.
CMFCPM00	Sample Extractor CPM control statements as described in the *CMF MONITOR Batch User Guide*.
CMFIPM00	Sample Extractor IPM control statements as described in the *CMF MONITOR Batch User Guide*.
CMFMON00	Sample control statements for running the CMFMON component of CMF MONITOR, as described in the *CMF MONITOR CMFMON User Guide*.
CMFCPM01 – CMFCPM15	Sample Extractor control statements for each of the possible combinations of products that use the Extractor CPM mode.

Table 1-4 Sample Control Statement Members Available for Customization in UBBPARM (Part 2 of 2)

Member Name	Description
CMFIPM01 – CMFIPM07	Sample Extractor control statements for each of the possible combinations of products that use the Extractor IPM mode.
CMFXDS00	Sample XDS control statements for starting the collection of cross-system data for use by SDSF. The distributed MAINVIEW for OS/390 PAS PROC points to this member. For more information about using this member, see the *MAINVIEW Administration Guide*.
CMFXDS01	Sample XDS control statements to start buffering CMF type records (excluding type 79). For more information about using this member, see the *MAINVIEW Administration Guide*.
CMFXDS02	Sample XDS control statements to start buffering all CMF type records including type 79. Note: If your CMF type user record is not 240, you must change the RECORDS statement to reflect the correct subtype. For more information about using this member, see the *MAINVIEW Administration Guide*.

Copying Sample Online Screen Definitions

The online component of CMF MONITOR presents information about your system through online views. You can display multiple views with one command by combining them into screen definitions. Four samples of screens definitions, each containing multiple views, have been created for your use. This step copies those sample screen definitions from BBSAMP to your own sitewide library, *hilevel*.SBBSDEF.

To copy the sample screen definitions

1. Copy *hilevel*.BBSAMP member CMFCSDEF to your private JCL library.
2. Modify the JCL by following the directions at the top of the member.
3. Submit the JCL.

For information about using the sample screen definitions or creating your own screen definitions, see the section entitled “Using Screen Definitions” in the *CMF MONITOR Online User Guide*.

Creating CLIST for Invoking CMFMON Online Facility

This step creates the CLIST for starting the CMFMON Online Facility. The CMFMON Online Facility displays job- and system-related data from an ISPF application. The data is presented in a format similar to that of RMF MONITOR II (RMFMON).

The CMFMON CLIST is used to invoke CMFMON Online Facility. The CLIST performs all necessary data set allocations and then displays the CMFMON menu from your TSO ISPF session.

To create the CMFMON CLIST:

1. Copy BBSAMP member CMFMON to your private CLIST library. Make sure that the CLIST library is in the SYSPROC concatenation of your TSO logon procedure.

2. Modify the CLIST by following the directions at the top of the member.

3. Save the CLIST.

For more information about using the CMFMON Online Facility, see the *CMF MONITOR CMFMON User Guide*.

Creating JCL for Starting CMFMON Write Facility

This step creates JCL that allows you to invoke the CMFMON Write Facility as a batch job and as a started procedure. By invoking the CMFMON Write Facility, you can write type 79 records either to the SMF data set or to an output data set of your choice. If you choose to write type 79 records to an output data set (not to SMF), this step also provides instructions for allocating that output data set.

Note: An output data set is required if you do not want CMFMON to write type 79 records to the SMF data set.

To create an output data set for type 79 records:

1. Copy BBSAMP member CMFJBSAM to your private JCL library.

2. Modify the JCL by following the directions at the top of the member.

Note: If you used this member to allocate CMF MONITOR Extractor output data sets in a previous step (described in "Specifying Extractor Operating Environment" on page 1-7), be sure to use a different name for your CMFMON output data set.

3. Submit the JCL.

To create a batch job for starting CMFMON:

1. Copy BBSAMP member CMONJCL to your private JCL library.

2. Modify the JCL by following the directions at the top of the member.

3. Save this member to use when you want to start CMFMON as a batch job.

To create a started procedure for starting CMFMON:

1. Copy BBSAMP member CMONSTC to a system procedure library.

2. Modify the JCL by following the directions at the top of the member.

3. Save this member so that you can invoke CMFMON as a started task from the console.

For information about using the CMFMON Write Facility, see the *CMF MONITOR CMFMON User Guide*.

Assembling and Linking the JES3 Mapping CSECT

This step is used only if your system runs a JES3 subsystem; do not perform this step if your system runs a JES2 subsystem.

CMF MONITOR JES sampler, which is controlled by the EXTSUM Extractor control statement, needs to know the correct offsets for your version of JES3 so it can use the proper CSECT mapping when gathering data. This step creates a job that assembles and links the mapping CSECT and provides the appropriate JES3 offsets to the EXTSUM sampler.

To assemble and link the JES3 mapping CSECT:

1. Copy *hilevel*.BBSAMP member CMFCJES3 to your private JCL library.

2. Modify the JCL by following the directions at the top of the member.

3. Submit the JCL.

For information about using the EXTSUM Extractor control statement, see the *CMF MONITOR Batch User Guide*.

You have now completed the manual customization procedure for CMF MONITOR. Chapter 2, “Post-Customization” describes your next options.

Chapter 2 Post-Customization

Now that you have completed either AutoCustomization or manual customization for CMF MONITOR, you can either customize CMF MONITOR even further or begin using any of its three components.

Using CMF MONITOR Online

After completing the customization steps, to begin using CMF MONITOR Online, you must start the required address spaces (CAS and PAS).

- See the *MAINVIEW Administration Guide* for more CAS and PAS startup instructions.

After starting these address spaces, you can begin using CMF MONITOR Online, and you will be able to take advantage of all its features if you perform further modifications. The following list describes the optional customization steps you can perform to take full advantage of the CMF MONITOR Online features:

- Complete the customization steps for defining VTAM connections for cross-systems communication between multiple CASs on multiple systems.

  See the *MAINVIEW Common Customization Guide* for more information about defining VTAM definitions for cross-systems communication.

- Complete the customization steps for defining target definitions for monitoring communication links among the active system and CASs and products on different systems.

See the *MAINVIEW Administration Guide* for more information about defining target definitions for CAS communication monitoring.

- Complete customization steps for defining the appropriate security checks for access to systems, products, view tables, and view or product actions.

Securing CMF MONITOR

The MAINVIEW environment works with your RACF, CA-TOP SECRET, or CA-ACF2 security package to control access to view data. Although *Implementing Security for MAINVIEW Products* fully explains how to use the security views and how they interact with your security package, there are a few things you should understand now.

- Security for CMF MONITOR Online and for the cross-system data APIs is implemented through two views: SERDEF and SERDEFL.

- When you display SERDEF, you will see that CMF MONITOR Online has defined a separate resource rule for

  — view data in general
  — data provided by each view table
  — CMF XDS API actions

- A *view table* is a family of views that display the same type of data. To find out which views are associated with a particular view table, see Part 3, “Enhanced Security” in the *Implementing Security for MAINVIEW Products*. Note that individual views cannot be secured. That is, when you grant or deny access to a view table, you grant or deny access to **all** views that belong to that table.

- With MAINVIEW security, either you can add rules for resources to your security package, using the default class and entity names for the resource, or you can change the class and entity names to conform to rules you have already defined. For example, suppose you have rules defined to your security package to control access to a resource identified by class DATASET and entity name SYS1.PROCLIB. You want to use the same rule to control access to MAINVIEW Address Space Table Data. Enter the command CHAnge beside the Address Space Table Data entity on SERDEF, and then change the class to DATASET and change the entity to SYS1.PROCLIB. MAINVIEW uses your SYS1.PROCLIB rules for Address Space Table Data.

Further Reading

After completing any additional customization steps, you can learn how to use CMF MONITOR Online by referring to the following manuals:

- *CMF MONITOR Online Getting Started* for using the MAINVIEW window interface.
- *CMF MONITOR Online User Guide* for using the CMF MONITOR Online views.

Using the Batch Component

Although you can begin using the CMF MONITOR batch component as soon as you complete the customization steps, you may want to make some further modifications.

The following list describes the optional modifications available for this component:

- Modifying the Extractor JCL statements. See the *MAINVIEW Common Customization Guide*.
- Allocating additional Extractor output data sets. See Chapter 3, “Writing Data to Extractor Output Data Sets”.
- Modifying the MVS PAS PROC to start collecting data in the XDS data buffer. See the *MAINVIEW Administration Guide*.
- Downloading the spreadsheet converter program to your PC. See Chapter 4, “CMF Analyzer Spreadsheet Converter”.

After making the desired modifications, you can learn about using the batch component of CMF MONITOR by referring to the *CMF MONITOR Batch User Guide*.

Using CMFMON

Before using the CMFMON component, you may want to use your External Security Manager (ESM) to protect your screens. If you are using an ESM such as RACF, CA-TOP SECRET, or CA-ACF2, you can protect the following program names. The program names begin with the letters CMF. The last part of each name corresponds with the CMFMON screen you are protecting.

Table 2-1

CMFAPF	CMFARD	CMFARDJ
CMFASD	CMFASDJ	CMFASRM
CMFASRMJ	CMFCHAN	CMFDDMN
CMFDEV	CMFDEVV	CMFENQR
CMFHFS	CMFILOCK	CMFIOQ
CMFLPA	CMFLNK	CMFPGSP
CMFPGSS	CMFSENQ	CMFSPAG
CMFXDSA	CMFXDSP	

There are no additional customization steps for CMFMON. To learn how to use CMFMON, see the *CMF MONITOR CMFMON User Guide*.

Chapter 3 Writing Data to Extractor Output Data Sets

The starter MVS PAS PROC sends Extractor data to SMF. If data is not written to SMF, you must specify that records be written to Extractor output data sets. In this case, you should have allocated Extractor output data sets during customization. Even if you did specify SMF recording but now want to record to Extractor output data sets, you need to first allocate these data sets.

BMC Software recommends that at least two data sets be specified to provide for *alternate data set support*. When two or more data sets are specified, the first one specified is called the *primary* data set and the others are called *alternate* data sets.

Alternate Data Set Support

If the Extractor is writing records to an Extractor output data set and that data set fills up, Extractor writing is automatically switched to an alternate data set. This process is referred to as alternate data set support. This support is not valid when data is being recorded to SMF; SMF provides its own alternate data set support.

The Extractor suspends recording if the current data set becomes full and no other data set is empty. At subsequent recording intervals, if an empty data set is detected, the Extractor resumes recording automatically.

Allocating Extractor Output Data Sets

You can define the same data sets for both CPM and IPM data, or you can define primary and alternate data sets. However, BMC Software recommends that you define at least two data sets for each mode.

If you are using VSAM, the manual customization member CMFJVSAM in *hilevel*.UBBSAMP contains sample JCL for allocating four data sets: one primary and one alternate data set for CPM mode and one primary and one alternate data set for IPM mode.

If you are using BSAM, the manual customization member CMFJBSAM in *hilevel*.UBBSAMP contains sample JCL for allocating four data sets: one primary and one alternate data set for CPM mode and one primary and one alternate data set for IPM mode. This JCL is defined with block sizes for either a 3380 or a 3390 device type; if you have a different device type, refer to Table 3-1 for the correct block size.

BSAM Extractor output data sets use the following attributes:

- `LRECL=32756`
- **`DSORG=PS`** (for physical sequential)
- **`RECFM=VBS`** (for variable block sequential)
- **`BLKSIZE=`***variable* (depends on the device type; see Table 3-1)

Table 3-1 Recommended Block Sizes for BSAM Extractor Output Data Sets

Device Type	Recommended Block Size
3375	11616
3380	11476
3390	11476
Tape (1600 bpi)	12288
Tape (6250 bpi)	32756
Other	8192

Note: CMF MONITOR increases the block size to 8192 if a smaller block size is defined.

CMF MONITOR adds new records into the primary data set after those that already exist, even if **`DISP=OLD`** or **`DISP=SHR`** is specified in the JCL. This addition prevents the destruction of any data that was previously collected. CMF MONITOR writes to the beginning of the primary data set and destroys the existing data if the output data set is on tape or if **`DISP=NEW`** is coded in the Extractor REPORT control statement

Note: The **DISP=NEW** status applies only to the primary data set that the Extractor writes to after initialization. See the *CMF MONITOR Batch User Guide* for more information about the REPORT control statement.

When switching is required, CMF MONITOR writes to an empty data set if one is available. If an empty data set is not available, recording is suspended.

Note: CMF provides two members in *hilevel*.UBBSAMP that contain JCL to clear your CPM and IPM data sets:

- CMFJCLRS is a started task for clearing data sets.
- CMFJCLRB is a batch job for clearing data sets.

Specifying Primary and Alternate Data Sets to the Extractor

You can specify either same or different primary and alternate data sets for both CPM and IPM modes. If only one data set is specified, the Extractor cannot provide alternate data set support.

When you specify the same primary and alternate data sets for both modes, all records from both modes go to the same data sets.

When you specify different data sets, the records from each mode go to different data sets.

In specifying data sets for both CPM and IPM modes:

- If CPM and IPM data go to the same primary data set, they must also go to the same alternate data sets. You cannot specify the same primary data set and different alternate data sets.

- If CPM and IPM data go to different primary data sets, they must also go to different alternate data sets. You cannot specify different primary data sets and the same alternate data sets.

There are two ways to specify primary and alternate data sets to the Extractor. Use one of the following methods; do not use both.

Method One: DD statements

One method of identifying the primary and alternate data sets to the Extractor is the presence of DD statements in the Extractor JCL. Valid data set DD names for CMF MONITOR and DSO are shown in Table 3-2.

Table 3-2 Primary and Alternate Data Set DD Names

Component	CPM	IPM
Extractor	//CMFCPM*xx* DD	//CMFIPM*xx* DD
DSO	//CMFCDS*xx* DD	//CMFIDS*xx* DD

You can specify up to 101 data sets, with *xx* representing any one or two alphanumeric characters.

Note: The primary data set is the first one specified. The order in which the DD names are specified is the order in which they will be used.

The Extractor writes to these data sets automatically if the DD statements are present and SMF=YES is not specified on the Extractor report control statement. If only one statement is defined, alternate data set support is not provided.

For more information about changing the Extractor JCL contained in the MVS PAS started task procedure, see the *MAINVIEW Common Customization Guide.*

Method Two: DSNLIST parameter

A second method of identifying primary and alternate data sets to the Extractor is through the DSNLIST= parameter on the REPORT control statement. A DSNLIST= parameter can be specified for dynamic allocation of up to 101 data sets in the REPORT control statement.

Note: The primary data set is the first one specified. The order in which the data set names are specified is the order in which they will be used.

See the *CMF MONITOR Batch User Guide* for more information about the DSNLIST= parameter and the REPORT Extractor control statement.

Chapter 4 CMF Analyzer Spreadsheet Converter

The CMF Analyzer spreadsheet converter enables you to transfer your formatted CMF Analyzer reports to your PC, and then convert these reports into Microsoft Excel spreadsheets. The resulting spreadsheets can be used for detailed analysis on the desktop, creating graphs, or producing specialized reports. The spreadsheet converter is available only for Microsoft Excel, Version 5 or later.

To use the spreadsheet converter, first download the spreadsheet converter program. Once it is available, you can store the output of the CMF Analyzer in a data set, transfer that data set to a PC file, and then run the spreadsheet converter to generate an Excel workbook.

Installing the Spreadsheet Converter

The spreadsheet converter program is distributed in *hilevel*.BBSAMP member CX98SSCX. To install the spreadsheet converter:

Step 1 Create a directory on your PC to be used for storing the spreadsheet converter and the converted reports.

Step 2 Transfer *hilevel*.BBSAMP member CX98SSCX to your PC (using IND$FILE or any other file download method) to a PC file named CX98SSCX.XLA.

- The XLA suffix is needed to designate this file as a Microsoft Excel Add-in.

- The file transfer must be BINARY (rather than ASCII), and CRLF codes must not be added.

Once CX98SSCX.XLA is created on your PC, you are ready to use the spreadsheet converter. For information about using the spreadsheet converter, see the *CMF MONITOR Batch User Guide*.

Index

Symbols

A

B

C

D

E

I

J

M

O

P

R

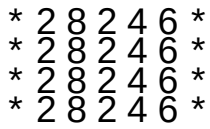
S

T

U

V

Notes



28246